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J.S. Department
of Transportation

**Urban Mass
Transportation
Administration**

Parking Pricing Demonstration in Eugene OR: Executive Summary

UMTA/TSC Evaluation Series

Final Report
February 1988



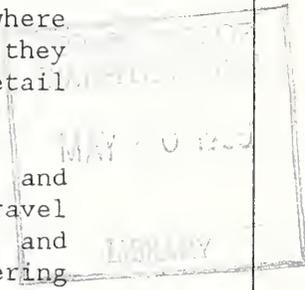
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<p>U.S. Department of Transportation Research and Special Programs Administration Transportation Systems Center Cambridge, Massachusetts 02142</p> <p>16. Abstract</p> <p>This report describes the results of a preferential parking/pricing demonstration program operated by the City of Eugene, Oregon, and funded by the Urban Mass Transportation Administration. The program established two residential parking permit zones in the West University neighborhood which restricted on-street parking duration to two hours for commuters. The program also designated certain areas where commuters could park on-street beyond the two-hour limit if they purchased a daily or monthly permit from the City or a local retail establishment or institution.</p> <p>This report assesses the effects of these parking management and pricing tactics on parking behavior, program compliance, travel behavior, and traffic flow. It also analyzes permit distributions and use, program costs and revenues, and implications for areas considering the application of these techniques.</p> <p>The report is divided into two documents: (1) Executive Summary describes the most significant demonstration findings; and (2) Technical Report and Appendices provides a detailed description and analysis of the Eugene demonstration and includes several appendices that illustrate various data collection strategies and forms used during the evaluation.</p>			
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PREFACE

This report is part of the Transportation Systems Center Evaluation Series for the UMTA Service and Methods Demonstration Program, U.S. Department of Transportation.

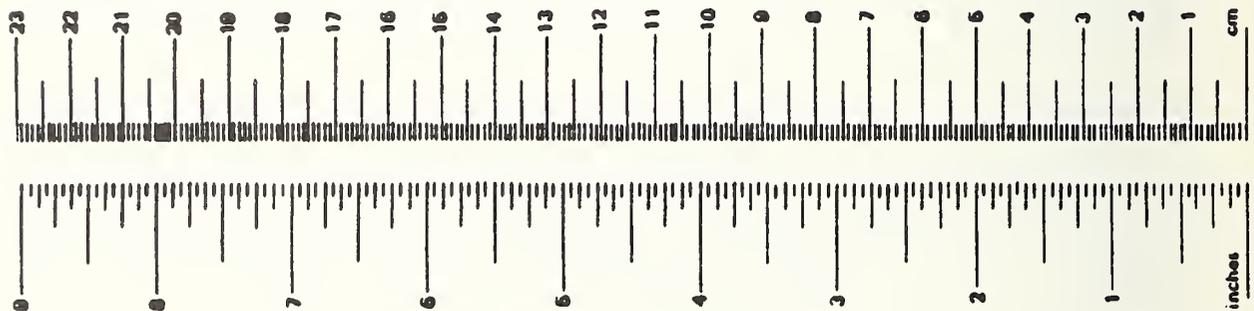
This report was prepared by Peat, Marwick, Mitchell & Co. at the request of the Transportation Systems Center, under Contract DOT-TSC-1758-25/26. The City of Eugene, through the Paratransit and Parking Administration of the Department of Public Works, provided the data for the report and contracted for the surveys. The purpose of the program was to demonstrate the use of preferential parking and permit pricing to relieve residents' parking difficulties and traffic congestion in the West University neighborhood.

The TSC project manager was Eric Schreffler, who provided useful comments and administrative assistance throughout the evaluation effort. The project manager for UMTA was Roger Tate. The project manager for Peat Marwick was Daniel Dornan. He was assisted by Robert Keith and Daniel Wagner. The report production was managed by Juanita Combs. The efforts of the Peat Marwick project team were supervised by Raymond Ellis, Peat Marwick's principal responsible for work conducted for the SMD program. The authors acknowledge the efforts of Peat Marwick's word processing and graphics staffs.

The staff of the Eugene Parking Administration provided invaluable assistance throughout the program evaluation effort in providing necessary data, conducting surveys, requesting traffic counting data, and responding to our many questions and requests. Especially helpful were Duane Bischoff, Jarvia Shu, and Jay Millikin, consecutive project coordinators for the program. Another invaluable program evaluation resource was Marshall Landman, who, as an outside contractor to the Parking Administration, helped to coordinate the evaluation survey and documentation efforts.

METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures				Approximate Conversions from Metric Measures			
Symbol	When You Know	Multiply by	To Find	Symbol	When You Know	Multiply by	To Find
LENGTH							
in	inches	2.5	centimeters	mm	millimeters	0.04	inches
ft	feet	30	centimeters	cm	centimeters	0.4	inches
yd	yards	0.9	meters	m	meters	3.3	feet
mi	miles	1.6	kilometers	km	kilometers	1.1	yards
						0.6	miles
AREA							
sq in	square inches	6.5	square centimeters	cm ²	square centimeters	0.16	square inches
sq ft	square feet	0.09	square meters	m ²	square meters	1.2	square yards
sq yd	square yards	0.8	square meters	km ²	square kilometers	0.4	square miles
sq mi	square miles	2.6	square kilometers	ha	hectares (10,000 m ²)	2.5	acres
	acres	0.4	hectares				
MASS (weight)							
oz	ounces	28	grams	g	grams	0.036	ounces
lb	pounds	0.45	kilograms	kg	kilograms	2.2	pounds
	short tons (2000 lb)	0.9	tonnes	t	tonnes (1000 kg)	1.1	short tons
VOLUME							
teaspoon	teaspoons	5	milliliters	ml	milliliters	0.03	fluid ounces
tablespoon	tablespoons	15	milliliters	l	liters	2.1	pints
fluid ounce	fluid ounces	30	milliliters	m ³	cubic meters	1.06	quarts
cup	cups	0.24	liters			0.26	gallons
pint	pints	0.47	liters			36	cubic feet
quart	quarts	0.96	liters			1.3	cubic yards
gallon	gallons	3.8	liters				
cu ft	cubic feet	0.03	cubic meters				
cu yd	cubic yards	0.76	cubic meters				
TEMPERATURE (exact)							
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature



1 in. = 2.54 cm (exactly). For other exact conversions and more detail tables see NBS Misc. Publ. 296, Units of Weight and Measure. Price \$2.25. SD Catalog No. C13 10 296.

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1. EXECUTIVE SUMMARY

The West University Neighborhood Parking Pricing Demonstration Program located in Eugene, Oregon, was instituted with the assistance of the Urban Mass Transportation Administration's Service Methods Demonstration (SMD) Program. Its purpose was to evaluate the impacts of parking management and pricing strategies aimed at improving availability and accessibility of on-street parking to residents of the West University neighborhood through the implementation of preferential parking and pricing strategies. The program consisted of preferential parking strategies aimed at resident parkers and parking pricing strategies aimed at nonresident parkers. The overall concept of the demonstration was based, in part, on the belief that residential parking permits by themselves would not be adequate to promote the objectives of the program without overly burdening the various commuter groups travelling to the area. It was believed that proper pricing and regulating of on-street parking available to commuters would mitigate the negative effects of the residential parking permit element of the program. Therefore, the program included a nonresident parking permit element intended to alleviate possible parking problems for area commuters. The pricing of commuter parking spaces was designed to provide parking for those who still wanted to park on-street, and to induce a greater proportion to park off-street or switch to alternative commute modes.

1.1 DEMONSTRATION SETTING

The City of Eugene is a medium-sized city located in the west-central part of Oregon (see Figure 1-1). Within the central part of the City, just southeast of the central business district, is the West University Neighborhood Area (WUNA). This is a largely residential area, with several major institutions (two universities and a regional hospital complex) and numerous small business establishments located within or adjacent to it. Many of those who worked or attended school in the WUNA used on-street parking spaces. As a result, the availability of accessible on-street parking spaces to WUNA residents was unacceptably low. The lack of available on-street parking spaces was coupled with traffic congestion within the WUNA, as motorists searched the area's residential streets for on-street parking spaces.

The approximately seven-by-five block program area (Figure 1-1) contains about 1,620 dwelling units, most of which are multiple-unit dwellings, as well as:

- o Sacred Heart General Hospital
- o University of Oregon
- o Northwest Christian College
- o Bureau of Land Management office
- o Numerous clinics and medical offices

EUGENE

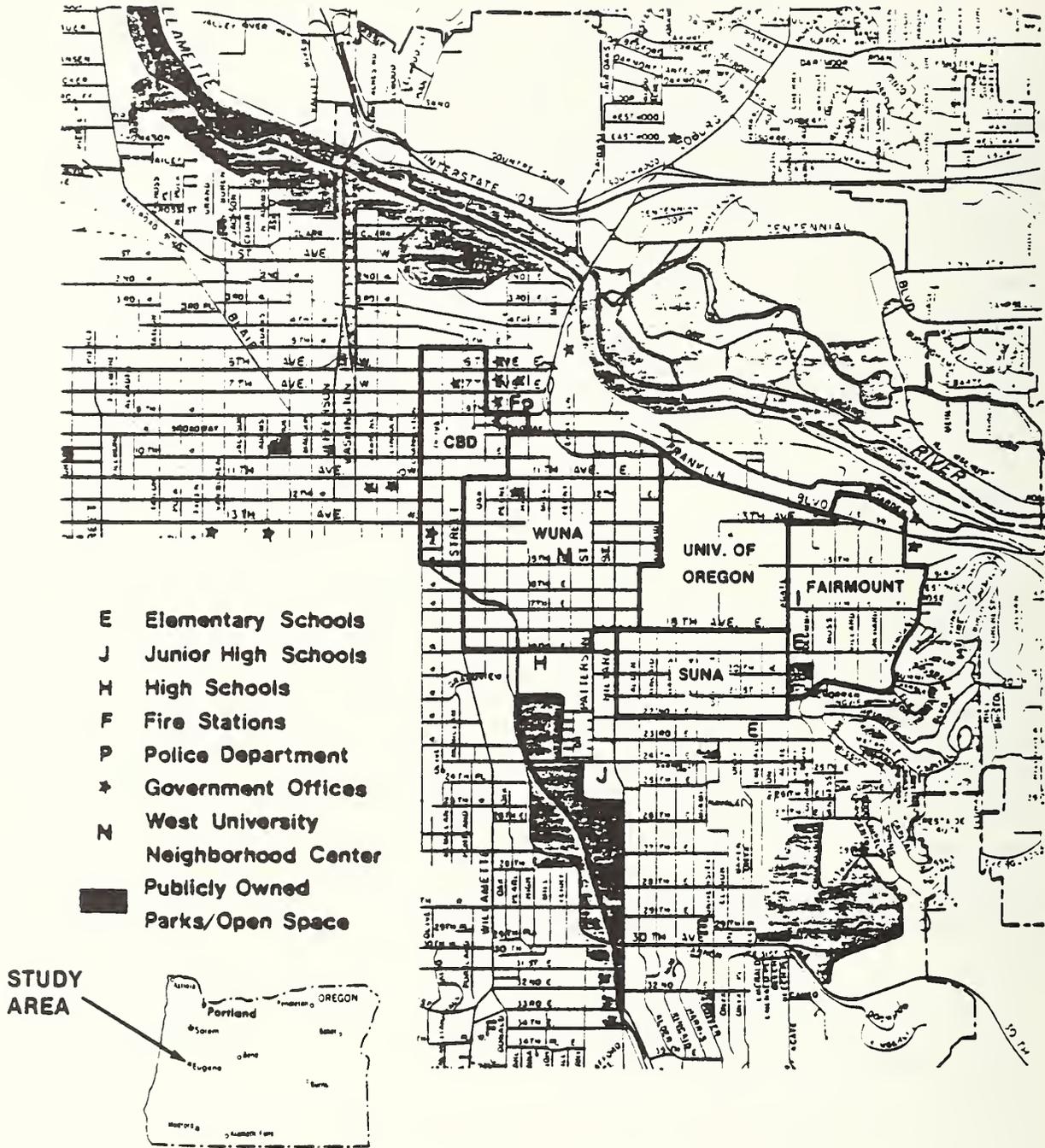


FIGURE 1-1. WEST UNIVERSITY PARKING PRICING DEMONSTRATION PROGRAM STUDY AREA

- o Numerous retail establishments
- o Several major off-street parking garages and lots

The program area contains a large proportion of rental units occupied principally by students attending the University of Oregon. The area is served by an extensive grid of residential and arterial streets, numerous bicycle paths, and Lane Transit District buses.

Before the program, on-street parking was restricted by signed time limits or coin-operated parking meters only in the vicinity of the retail establishments, concentrated along 13th Avenue and nearby cross streets. Of the 863 on-street parking spaces in the program area, most were unrestricted before the program. According to the Eugene Parking Administration, 79 percent of the unrestricted spaces were typically occupied by commuters. Because the program area had only 1,580 off-street parking spaces available to the general public, a shortage of about 1,000 spaces existed for local residents even before the program began.*

In addition, the institutions and businesses in the area owned and administered 4,620 other off-street parking spaces.

1.2 PROGRAM DESCRIPTION

The WUNA parking/pricing demonstration program was envisioned as a combination of a residential parking permit program with innovative parking/pricing strategies which focused on the sale of daily and monthly parking permits to commuters and other nonresident motorists parking in the program area. The demonstration program consisted of five major parking management and pricing tactics:

- o On-street parking supply tactics - comprising resident parking permits, monthly and daily commuter parking permits, guest parking permits, and short-term parking zones.
- o On-street parking pricing tactics - comprising market rates for on-street, long-term parking permits for commuters and variable rates for on-street, short-term parking spaces near retail establishments controlled by centralized parking meters.
- o Parking program marketing tactics - comprising parking permit sales outlets, parkers' guidebook, and community and other interest group involvements.
- o Parking program enforcement tactics - comprising parking control officers, vehicles, and citation information system.
- o Alternative transportation promotion tactics - comprising public transportation and carpool information sharing and service promotion.

* Based on code conformity requirements of 2,581 off-street parking spaces for the area.

These management tactics were intended to achieve the following program goals:

- o Reduce long-term, on-street parking by commuters
- o Reduce traffic flow into the program area
- o Divert heavy traffic to major arterials

The objectives of the program were to:

- o Increase the availability and accessibility of on-street parking to residents, visitors, and shoppers in the West University neighborhood
- o Increase the utilization of off-street parking facilities and alternative travel modes by nonresident commuters to the West University neighborhood
- o Increase the turnover of short-term, on-street parking spaces near the neighborhood's retail establishments
- o Reduce the level of automobile traffic along residential roads in the program area

The WUNA parking program was implemented in three phases. In the first phase, begun in January 1981, the City performed preliminary planning and developed a grant application to UMTA for the program. The second phase, begun in March 1983, involved refining the program plan based in part on the input provided by local advisory committees and citizens/special interest groups and conducting pre-implementation (baseline) data collection for the program. The third phase consisted of initiating the program in February 1984, making further program modifications as needs and concerns were identified, and conducting post-implementation data collection and program documentation through December 1984.*

The WUNA parking/pricing program involved dividing a major portion of the WUNA into two residential zones, Zones B and C, where the residential parking permits were applicable (see Figure 1-2). Residents could obtain free residential parking permits that enabled them to park on-street without program restrictions. Residents could also obtain free guest parking permits for their visitors. Commuters, shoppers, and other nonresident motorists could park on-street for up to two hours in zoned spaces during program hours without restrictions. In certain portions of Zone C, nonresident motorists could purchase Zone D daily or monthly parking permits for \$1.50 per day or \$10.00 to \$17.50 per month, depending on any employer subsidy or discount passed on by the vendor (that has been realized through

* The pricing program did not end at that time. The evaluation of the demonstration, however, was designed for a finite period, ending in December 1984.

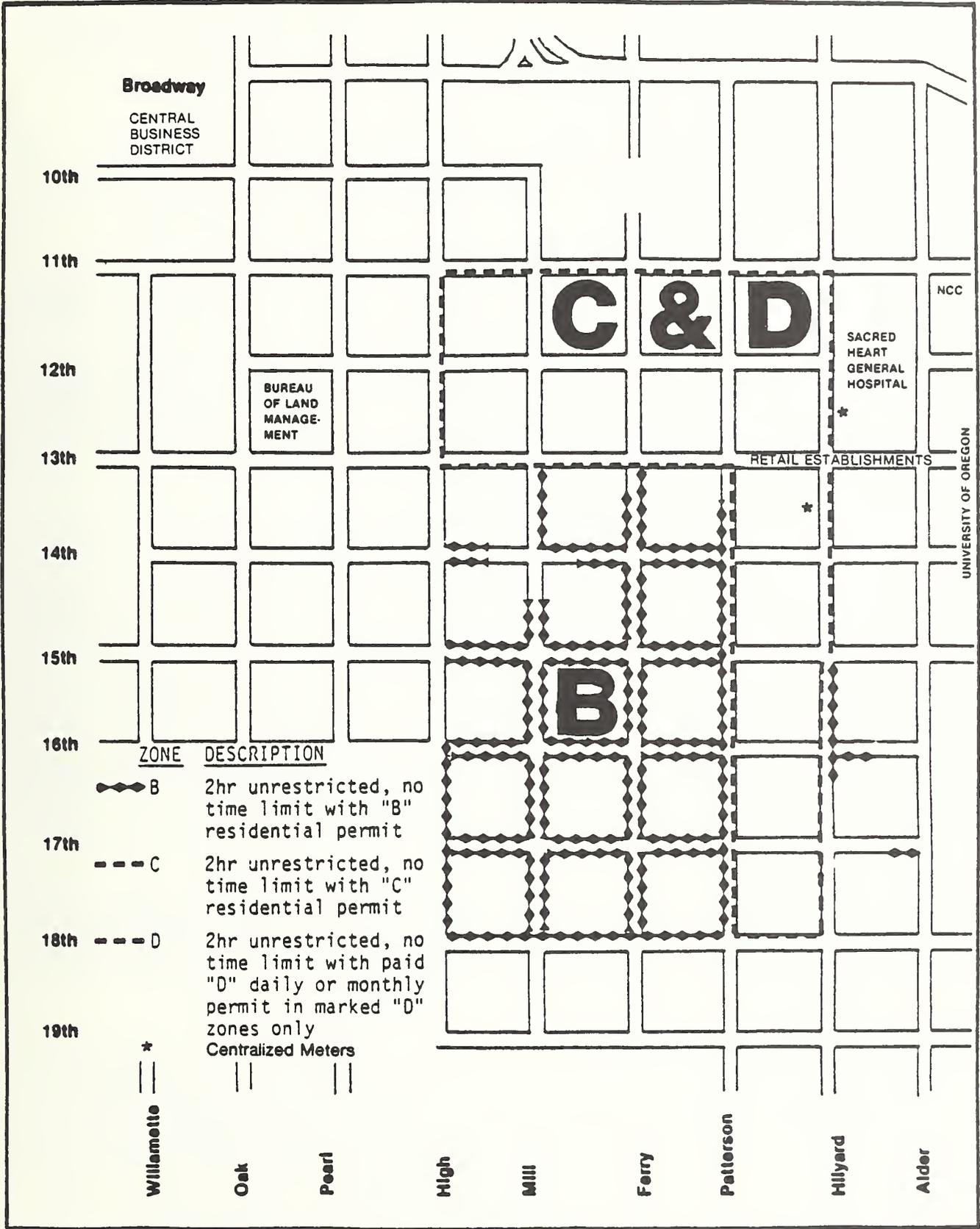


FIGURE 1-2. WUNA PARKING PROGRAM ZONE BOUNDARIES

quantity sales). These Zone D parking permits enabled the purchasers to park in Zone D parking spaces without time limit, providing a Zone D parking space was available. The parking restrictions were originally in effect Monday through Saturday, but in August 1984, Saturday was dropped from the program due to a perceived lack of need.

The program encouraged the use of ridesharing and public transit as alternatives to driving alone through the offer of information brochures and carpool matching. Ridesharing was further promoted when the Parking Administration established free on-street parking spaces for carpools near Sacred Heart General Hospital.

Program compliance was encouraged through an expanded parking enforcement program in the West University neighborhood. This expansion involved adding more enforcement officer time to that previously applied to the program area.

The use of centralized parking meters to regulate short-term parking spaces near the 13th Avenue retail district and Sacred Heart General Hospital was postponed after problems were encountered in revising the software designed to provide graduated parking rates and full automated documentation of space utilization. The centralized parking meters were later installed in July 1985.

The program originally included provisions for encouraging local property owners, including WUNA businesses and churches, to offer off-street parking to commuters on their property. However, informal arrangements were made between individual commuters and numerous WUNA property owners, involving the leasing of unused garages, driveways, and lots, without the City getting directly involved in the process. Therefore, during the first year of the demonstration, no formal efforts were made to further encourage this approach to increasing the available supply of off-street parking in the program area.

The program made use of microcomputer technology to document and monitor residential parking permit use, monthly and daily permit sales, monthly citation revenues, and monthly program expenses by program account.

1.3 PROGRAM RESULTS

The results of the analysis and evaluation of the WUNA parking/pricing program can be summarized in terms of their effects on the parking behavior and travel behavior of residents of and commuters to the West University neighborhood.

1.3.1 Effects on Parking Behavior

The major impacts of the program were on the utilization of on-street and off-street parking spaces in the WUNA. As shown in Table 1-1, on-street parking space utilization was reduced significantly in all program zones by the program, dropping almost 40 percent between May 1983 and May 1984. The largest decrease occurred in Zone B, the most residential of the program zones. The decline in on-street parking space utilization resulted from a large decline in parking duration in all program zones. This was a result of commuter efforts to keep their on-street parking duration to within the two-hour exemption allowed by the program.

TABLE 1-1. SUMMARY OF PARKING IMPACTS
BY PROGRAM ZONE

<u>Parking Characteristic</u>	<u>Zone B</u>	<u>Zone C</u>	<u>Zone D</u>	<u>Total</u>
Utilization	-50%	-33%	-22%	-39%
Duration	-30%	-39%	-36%	-37%
Turnover	-29%	+8%	+21%	-4%
Frequency	-27%	+13%	+18%	-2%

Source: On-street parking occupancy counts, collected in May 1983 and 1984.

The same number of cars parked in the program area in 1983 as in 1984. The number of cars parking in Zones C and D increased during the demonstration period, mostly in Zone D, while the number of cars parking in Zone B decreased. This reflected the preference of WUNA commuters to park close to their destinations in or near Zones C and D, the availability of nonresident parking permits for on-street parking spaces in Zone D, and the increase in daily trip-making frequency by WUNA commuters who reduced their parking duration per trip to comply with the two-hour exemption allowed by the program. The extent to which commuters shifted their cars to avoid being ticketed was unclear.

Significant increases were noted in the use of off-street parking facilities in the program area, amounting to about 31 percent for a sample of six off-street parking facilities located in or adjacent to the program area. This increase included both daily and monthly parking in off-street parking facilities and resulted primarily from the diversion of WUNA commuters who formerly parked on-street before the program was implemented. One possible explanation for the relative stability in the overall frequency of cars parking in the program area is that the volume of parkers diverted to off-street parking facilities was balanced by the number of parkers who either made multiple trips to the WUNA or simply relocated their cars in accordance with the two-hour parking limit.

Little change was noted in the utilization of on- or off-street parking spaces in areas adjacent to the program area. This reflects a lack of significant parking diversion by WUNA commuters to non-program areas, and results in part from the lack of accessibility of these areas to the major trip generators located in or adjacent to the program area.

Parking accessibility was measured in the surveys by the reported distance between parking location and destination and the time needed to find an available parking space. According to the survey responses, parking accessibility was perceived to have improved for residents of the program area and short-term parkers following program implementation. However, it decreased for WUNA commuters, especially those destined for Sacred Heart

General Hospital, Northwest Christian College, and the Bureau of Land Management. Specifically, the following changes in parking accessibility by parker group were perceived by those surveyed:

- o Resident and short-term parker search time was reduced by an average of two minutes and a half minute, respectively
- o Resident parker walking distance decreased by a third of a block on average
- o Commuter parker search time increased by almost a minute, while commuter walking distance increased by a fifth of a block, on average

Little change in parking location choice was noted for parkers destined for either the University of Oregon or Northwest Christian College. Numerous employees of Sacred Heart General Hospital were diverted from on-street spaces to off-street parking facilities in the WUNA. Employees of the Bureau of Land Management were also somewhat diverted from on-street spaces to off-street parking facilities. Of those surveyed, commuters who reported parking on-street in the program area in 1983, about one-third diverted to off-street parking facilities. Most of these were commuters to Sacred Heart General Hospital. The rest continued to park on-street.

WUNA residents were clearly pleased by the program. Most of them found on-street parking spaces more available and accessible to them. About 80 percent of residents surveyed favored continuing the program in its present form. Only about 5 percent indicated it should stop; the remaining 15 percent suggested various modifications.

WUNA commuters were less supportive of the program, particularly those from Sacred Heart General Hospital and the Bureau of Land Management. Commuters generally found on-street parking in the area less available and accessible after the program was initiated. They also found off-street parking harder to find. Despite this, about 55 percent of all commuters surveyed in May 1984 favored continuing the program. Only about 8 percent indicated it should stop, with the remaining 37 percent suggesting various modifications. Employees of Sacred Heart General Hospital and particularly the Bureau of Land Management were more outspoken in opposing the program. However, various modifications to the program since the date of the survey have been aimed at reducing the negative impacts of the program on these particular commuter groups.

The following summarizes the major parking impacts of the program on five groups of WUNA commuters:

- o University of Oregon/Faculty - continued to drive and park on campus; some used WUNA parking permits.
- o University of Oregon/Students - shortened their parking duration; some were diverted to walking or bicycling.

- o Sacred Heart General Hospital - diverted to off-street parking facilities (both private and public); some formed carpools. This group was the most negatively impacted by the program due to the lack of available off-street parking spaces located near the hospital.
- o Northwest Christian College (NCC) - continued to drive and park on campus; not affected by the program due to on-campus parking space availability and location at the periphery of the program area.
- o Bureau of Land Management (BLM) - program area boundary changes reduced program impacts; some diverted to walking or bicycling.

Short-term parkers in the WUNA generally favored the program, though many suggested further modifications to improve on-street parking availability near the retail section of the WUNA, since almost 35 percent found it more difficult to locate on-street parking after the program began.

Most program area businesses and institutions that were interviewed generally favored the program, although many believed the program influenced them little since it did not apply to many of their locations. Most businesses interviewed suggested that the program be modified in some way, such as building an off-street parking facility in the program area, increasing parking enforcement near their locations, or more actively promoting the short-term parking program in the WUNA.

1.3.2 Effects on Travel Behavior

The program changed the travel behavior of WUNA commuters very little, as defined by the choice of mode or traffic flow. As shown in Table 1-2, 95 percent of all commuters who parked on-street before the program, in 1983, continued to drive alone to the WUNA after program implementation. Of this group, over 70 percent continued to park on-street after the program was implemented. These are significantly higher percentages than originally projected by the City prior to the start of the program. Two percent walked or bicycled, one percent carpooled and one percent used the bus. Primary users of carpooling as a travel mode alternative were Sacred Heart General Hospital commuters. The primary groups using walking or bicycling as a travel mode alternative were University of Oregon and Bureau of Land Management commuters. However, transit was used the least as an alternative travel mode by those commuters most affected by the program. These individuals preferred to alter their parking behavior rather than their mode choice, due to their overwhelming preference for the automobile.

Most commuters who had changed their commuting patterns during the period of program implementation attributed their change to non-program-related factors, such as changing residential or employment location, weather, or fuel costs. Program-related factors such as parking availability and cost were as prominent in changing community patterns only for employees of Sacred Heart General Hospital and BLM.

TABLE 1-2. COMPARISON OF CITY PROJECTIONS AND
SURVEY RESULTS OF PROGRAM IMPACTS ON COMMUTER MODE
AND PARKING CHOICES

<u>MODE CHOICE</u>	<u>CITY PROJECTIONS*</u>	<u>SURVEY RESULTS**</u>
Automobile	76%	95%
Other Modes***	<u>24%</u>	<u>5%</u>
Total	100%	100%
 <u>PARKING CHOICE</u> (Automobile Mode Only)		
On-Street Parking Spaces	34%	72%
Off-Street Parking Facilities	<u>66%</u>	<u>28%</u>
Total	100%	100%

* Eugene Public Works Department, memorandum on Appeal of West University On-Street Parking Program, November 16, 1983, p.A8.

** Commuter survey, conducted in May 1984.

*** Includes ridesharing, bus, taxi, walking, and bicycling.

Most of the WUNA residents and commuters surveyed indicated that the program had no perceptible change in traffic volume within the program area. A higher proportion of residents indicated a decrease in traffic volume in the program area than the proportion that indicated an increase. These results were more pronounced in Zone B than in Zone C, where commuters were more likely to seek parking. In contrast, the proportion of commuters that indicated the program increased traffic volume in the program area was higher than the proportion that indicated that it decreased traffic volume. These results were reflective of all commuter groups surveyed. The results of a series of traffic counts taken in the program area before and after program implementation proved inconclusive.

Overall, the program increased the accessibility of on-street parking to WUNA residents, while reducing it to long-term commuter parkers. Commuter parkers tended to react either by shortening their parking duration consistent with the program's two-hour exemption period for non-resident parkers (especially among students of the University of Oregon), or by diverting to off-street parking facilities (especially employees of Sacred Heart General Hospital). Little diversion to non-auto modes or ride sharing resulted from the program.

Other changes in parking and travel behavior of WUNA residents and commuters may result from the program over the long term. However, this evaluation focused on behavioral changes which occurred during the first year of the demonstration period for individuals who resided, parked, or travelled in the program area both before and after program implementation.

1.4 PERMIT DISTRIBUTION AND USE

One of the most important pricing strategies attempted by this demonstration program was the sale of monthly and daily parking permits for use by commuters. The use of these Zone D parking permits was much less than originally estimated. Only about 10 percent of the projected number of Zone D parking permits were actually sold by the City during 1984. This level of usage fell to less than 7 percent in 1985. Between February and December 1984, the average number of monthly parking permits sold per month was 41 and the average number of daily parking permits sold per month was 157, or approximately 8 per day. Hence, on a typical weekday in 1984 fewer than 50 commuters parked on-street with a commuter (Zone D) parking permit.

The low use of Zone D permits by WUNA commuters is attributed to several factors, including:

- o reductions in the program area and number of restricted parking spaces
- o lack of guaranteed parking space availability for bearers of Zone D permits
- o low penalty for parking program violations

- o commuter flexibility in adapting their parking behavior by reducing parking duration to two hours or less, thereby avoiding the need to buy a Zone D parking permit, park off-street, or accept the risk of a parking citation

As shown in Figures 1-3 and 1-4, Zone D monthly parking permits were used significantly more frequently than daily permits, due to their ease of acquisition and lower unit price. Though used less than estimated by the original program planners, monthly parking permits provided an important parking alternative for commuters who could not find available off-street parking spaces convenient to their destinations. The wholesale pricing system for Zone D monthly parking permits encouraged local businesses and institutions to carry the permits and prompted WUNA commuters to buy them, particularly when employers helped to subsidize a portion of the permit cost for their employees and when the Zone D permits were less costly than parking in off-street lots.

Zone D daily permits were primarily used by a single business user in 1984, which issued them to its clients and volunteer staff. When this clinic curtailed its use of daily permits in the Spring of 1985, the level of daily permit use fell to an average of only one per working day or 20 per month. Greater use of daily parking permits is not expected due to their relative inconvenience and the availability of alternative parking arrangements.

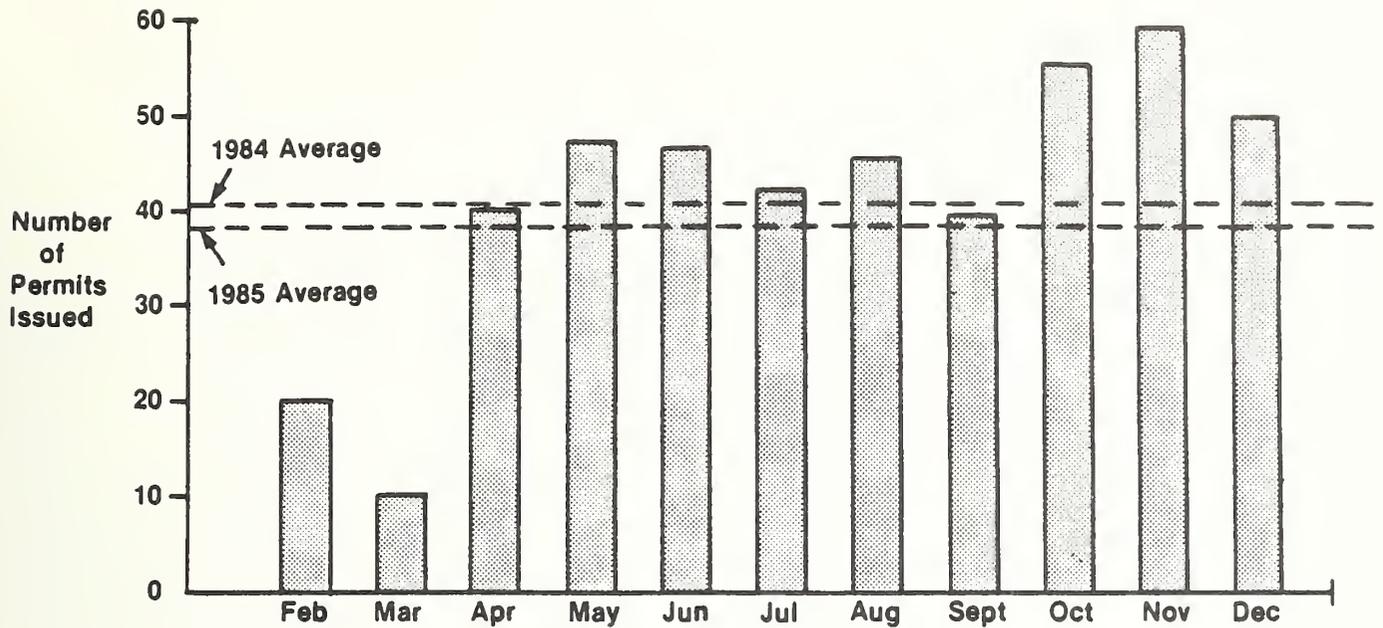
Zone B and C resident and guest parking permits were widely used in the program area. Almost half of the residents responding to the survey had obtained residential parking permits during the first year of the demonstration period. A somewhat larger group of Zone B residents obtained these permits than did Zone C residents, with non-student residents predominating. Residents without parking permits typically had off-street parking spaces (driveway, garage, lot) associated with their place of residence.

1.5 PROGRAM COSTS AND REVENUES

A comparison of program costs and revenues reviewed during the development, implementation, and first year of operation provided useful insights into the financial viability of the various program strategies. A comparison of actual program costs and revenues to those estimated by the original program planners provided further insights into the reasonableness of these earlier estimates, the financial effects of program modifications, and the behavioral changes of program participants.

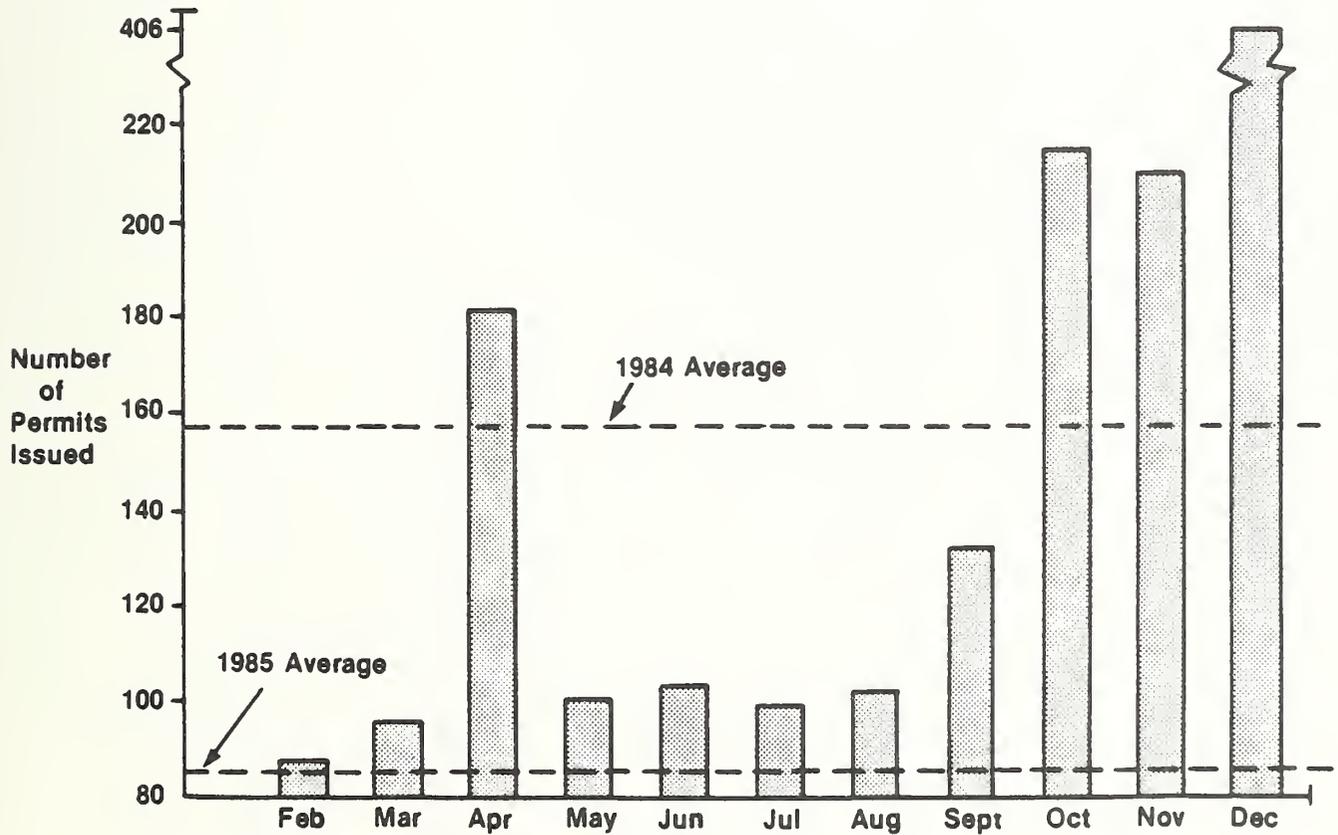
According to Table 1-3, both program reviews and costs through the first year of the demonstration period were significantly below the levels projected by the City's original program application. Program revenues, in particular, lagged far behind expectations, amounting to only 14 percent of the level projected. Total program costs were half of the level projected. The major reasons for these results include:

- o smaller program area, thereby reducing the number of program block faces eligible for permit sales and citation issuance



SOURCE: Eugene Parking and Paratransit Administration

FIGURE 1-3. COMMUTER MONTHLY PARKING PERMIT SALES BY MONTH - 1984



SOURCE: Eugene Parking and Paratransit Administration

FIGURE 1-4. COMMUTER DAILY PARKING PERMIT SALES BY MONTH - 1984

TABLE 1-3. COMPARISON OF BUDGETED AND ACTUAL
PROGRAM COSTS AND REVENUES
(1984 Dollars)

Item	Budgeted ¹		Actual ²	
	Demonstration Period	Post- Demonstration Period	1984	Post- Demonstration Period
1. Annual Program Costs				
a. Capital (initial year only)	\$129,400	-	\$ 39,163	-
b. Evaluation	40,000	-	40,865	-
c. Operating	175,830	\$125,000	90,844*	\$31,200
Subtotal	\$345,130	\$125,000	\$170,872	\$31,200
2. Annual Program Revenues**				
a. Citations	\$ 16,800	\$ 16,800	\$ 12,907	\$18,000
b. Monthly Zone D Permits	60,480	60,480	7,600	5,400
c. Daily Zone D Permits	71,280	71,280	2,545	1,800
d. Centralized Parking Meters	14,784	14,784	-	6,000
Subtotal	\$163,344	\$163,344	\$ 23,052	\$31,200
3. Annual Operating Surplus (Subsidy)	(\$ 12,486)	\$ 38,344	(\$ 27,383)	\$ 0
4. Annual Total Surplus (Subsidy)***	(\$ 33,578)	\$ 17,252	(\$ 37,688)	(\$10,305)

* Consists of \$40,409 in planning and start-up costs and \$50,435 in operating costs.

** 1984 revenues annualized to 12 months.

*** Includes annualized capital and planning and start-up costs.

Sources:

¹ West University Neighborhood Parking Pricing Demonstration Program Grant Application, July 14, 1982, pp. 1 through 10.

² Eugene Public Works Department - Transportation Division, June 21, 1985.

- o delayed installation of centralized meters, revenues from which were expected to make a positive contribution to the program
- o significantly smaller volume of Zone D parking permit sales, especially daily permits
- o smaller Parking Administration staff used to develop, implement, and administer the program, due to personnel turnover, consolidation of permit sales and administration functions under another City agency, and use of outside consultants
- o decision not to acquire hand-held data recorder/processors

In the first year of operation, operating revenues from the program covered 46 percent of direct operating costs (38 percent of total annualized costs, excluding evaluation costs). The Parking Administration estimates that following the demonstration period, operating revenues will fully cover direct operating costs as the program stabilizes and staff efforts regarding the program are reduced.

It is unlikely that the sale of Zone D parking permits will increase in the future, particularly if the penalty for program-related parking violations does not increase significantly. Increasing parking violation penalties would probably increase program revenues due to increases in citation revenues and possible increases in Zone D parking permit sales. Program revenues could also be enhanced by charging more for Zone D permits, as originally planned, as long as parking fines are raised significantly.

1.6 ACHIEVEMENT OF PROGRAM GOALS AND OBJECTIVES

The West University Neighborhood parking/pricing demonstration program met with varying degrees of success in achieving its goals and objectives during its first year of operation. Long-term, on-street parking by commuters was significantly reduced in the WUNA, as commuters either parked in off-street facilities or shortened their parking duration to match the program's two-hour parking exemption. The use of off-street parking facilities by diverted commuters significantly increased their utilization, bringing many lots to their saturation point.

The program clearly improved accessibility to on-street parking for program area residents. In addition, parking turnover in Zones C and D increased after program implementation, particularly in Zone D near the WUNA's retail establishments. However, shoppers may have had their parking accessibility reduced somewhat by short-term commuters parking in metered or signed spaces near the WUNA's retail establishments.

No appreciable change in the use of various travel modes resulted from program implementation, according to the survey results. Most commuters continued to drive to the WUNA. Although a small percentage of commuters diverted to walking, bicycling, and carpooling, most of those who changed their commuting patterns reported doing so for reasons not related to the program.

It is not clear whether any significant changes in traffic volume or routing took place in the WUNA as a result of the program. Some increases in travel and parking frequency were noted in Zones C and D. This could have resulted from the diversions of commuters from Zone B to Zones C and D, as well as the increase in parking frequency caused by commuters who reduced their parking duration but increased their daily trip frequency.

During program implementation and the first year of the demonstration period, numerous modifications were made, including:

- o reducing the size of the program area and subsequently adjusting program boundaries and zone designations
- o establishing free carpool spaces
- o eliminating program-related parking restrictions and enforcement on Saturdays
- o shortening program-related parking restrictions near Sacred Heart General Hospital by two hours, ending at 4:00 p.m. instead of 6:00 p.m., for selected on-street parking spaces
- o establishing a wholesale price schedule to encourage the sale of Zone D monthly parking permits sold by retail establishments and institutions in the program area
- o allowing monthly parking permits purchased from the City to be used in a municipal parking lot near the BLM, which also included free carpool spaces

While these modifications helped to implement the program and keep it operating, several of the changes reduced the effectiveness of certain elements of the program, particularly dealing with the pricing of program area parking. Many of the parking constraints envisioned by the original program design to encourage commuters to the WUNA to purchase parking permits for on-street parking or to use alternative travel modes (such as bus or carpool) were reduced or eliminated as the program evolved.

Reducing the program area and shortening the enforcement period on selected blocks made it easier for commuters to find unrestricted on-street parking. A low penalty for program-related parking violations further reduced the incentives for encouraging the use of daily or monthly parking permits or alternative travel modes by commuters, despite their highly competitive prices. Program modifications also reduced the revenue potential of the program, since fewer blocks were included, enforcement hours were curtailed somewhat, and implementation was delayed by five months.

While the modifications did change the value of the program and reduce the salience of its pricing strategies, the resulting program appears to have largely achieved its primary objectives of increasing the availability of

on-street parking in the program area to local residents and short-term parkers, while increasing the utilization of off-street parking facilities by area commuters.

1.7 IMPLICATIONS FOR OTHER AREAS

Many of the findings from this demonstration program depend on the site-specific characteristics of the West University Neighborhood Area. Its proximity to a major university, a regional hospital complex, and the Eugene CBD provides unique opportunities and constraints for applying a preferential parking/pricing program. Several broad conclusions which can be drawn from the first year of this program's operation are listed below:

- o Successful program implementation requires continuous flexibility on the part of program administrators in dealing with program concerns and constraints and developing appropriate program modifications. Program modifications and delays are characteristic of these programs which require a certain amount of trial-and-error testing to fully define program elements. However, the extent of these changes can be reduced somewhat by a thorough planning and public participation process during program development and implementation, and ongoing monitoring during program operations.
- o Preliminary program revenue and cost estimates are highly sensitive to program modifications as well as various external factors. Care should be exercised when projecting the revenue potential of parking/pricing strategies.
- o Parking pricing strategies will have limited applicability where significant parking disincentives are not in place, particularly if parking fines or off-street parking costs are perceived by commuters as less onerous than the pricing strategy being implemented (such as commuter parking permits).
- o Preferential parking/pricing programs are more likely to change parking behavior than travel behavior (mode choice) where significant parking disincentives are not in place and the suburban housing patterns of commuters are not well served by local transit. Most commuters will either use off-street parking facilities, if available, or adapt their parking duration to the constraints of the program to protect their mode preference for driving. In areas dominated by a major university, the most likely travel diversions will be to walking, bicycling, or carpooling. In areas dominated by hospitals and office buildings, the most likely travel diversion will be to carpooling. In Eugene, public transit (bus) was the least preferred alternative mode to the automobile.
- o Short-term parking exemptions allow commuters to continue to drive and park on-street if their schedules are sufficiently flexible that they can adapt their parking duration and frequency to the constraints of the program. Commuting students would be included in this category.

- o Fines for program-related parking violations could undermine the effectiveness of a preferential parking/pricing program if established too low. Fines should serve as an incentive for parker compliance with program-related parking restrictions.

- o Informal private arrangements for leasing off-street parking spaces from local land owners, businesses, and institutions represent an alternative parking resource for commuters. These arrangements evolve in response to the on-street parking supply constraints imposed by a preferential parking/pricing program, thereby reducing the potential negative effects of such programs on area commuters.

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